

PROJECT DESCRIPTION

GENERAL

This project involves the installation of a traffic control signal with emergency vehicle detection at the intersection of MD 8/MD 18 at MD 18/Skipjack Parkway in Queen Anne's County. MD 8 is assumed to run in a North/South direction

INTERSECTION OPERATION

This intersection is proposed to operate in a fully actuated mode with MD 8 northbound and MD 8 southbound operating concurrently. MD 18 and Skipjack Parkway will also operate concurrently. Eastbound MD 18 will have an exclusive emergency vehicle pre-emption phase. A NEMA (5 phase) fully actuated controller housed in a base mounted cabinet with three- 4 channel rack mounted loop detector amplifiers shall be installed at this location.

SPECIAL NOTES

1. The following contact persons for District #2 are as follows:

Mr. Richard Lindsay, District Engineer  
Phone: (410) 810-3210

Mr. Robert Keil, Assistant District Engineer-Traffic  
Phone: (410) 810-3240

Mr. Barry Clothier, Assistant District Engineer-Utility  
Phone: (410) 810-3210

Mr. Richard L. Daff, Sr., Chief Traffic Operations Division  
Phone: (410) 787-7630

2. Maintenance of traffic will be handled by the Contractor utilizing the following standard plates for traffic control: 104.00 - 104.30, 104.44.01, 104.45.01, 104.48.01.

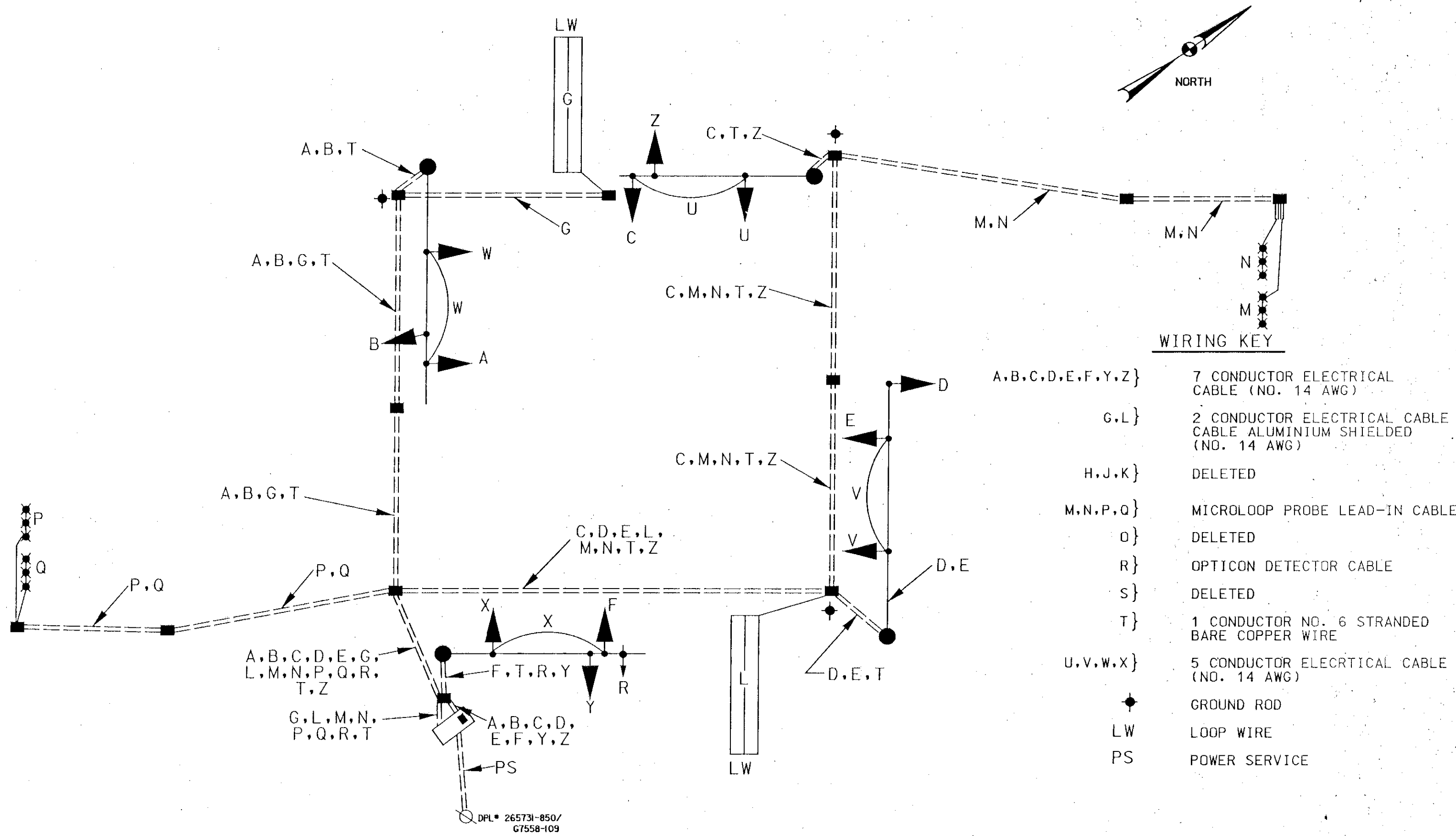
A. Equipment to be supplied by MD-SHA.

Item No.	Description	Units	Quantity
9002	Detector amplifier four - (4) channel rack mounted	EA	3
9004	Sheet aluminium signs consisting of: 3 EA W3-3 (36"X36") 1 EA R1-2 (36"X36"X36") 4 EA D3-2 (16"XVAR) 4 EA D3-2 (32"XVAR) 2 EA GUIDE SHIELD (36"X75") 2 EA GUIDE SHIELD (24"X51") 1 EA R3-5R (36"X36")	EA	221
9081	Cabinet intersection monitor, size 6	EA	1
9087	Controller ASC II W/ Telemetry	EA	1

B. Equipment to be furnished and/or installed by the Contractor.

ITEM	Description	Unit	Quantity
1001	MAINTENANCE OF TRAFFIC	EA	EA
1002	MOBILIZATION (PER ASSIGNMENT)	EA	EA
2002	TEST PIT EXCAVATION	CY	5
5003	24 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	LF	200
8003	CLEAN, CUT, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	EA	1
8015	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	36
8017	FURNISH AND INSTALL 3M OPTICOM #721 DETECTOR EYE	EA	1
8018	FURNISH AND INSTALL 3M OPTICOM #760 CARD RACK	EA	1
8019	FURNISH AND INSTALL 3M OPTICOM #762 DISCRIMINATOR MODULE	EA	1
8024	INSTALL STEEL POLE AND SINGLE MAST ARM (ANY SIZE) (50' - 1) (60' - 2) (70' - 1)	EA	4
8031	FURNISH AND INSTALL 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	1100
8033	FURNISH AND INSTALL 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	40
8034	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	60
8035	FURNISH AND INSTALL 4 CONDUCTOR OPTICOM DETECTOR CABLE	LF	120
8036	RELOCATE EXISTING SIGN	SF	1
8037	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION	CY	18
8038	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	710
8039	FURNISH AND INSTALL 1 INCH ELECTRICAL CONDUIT - GALVANIZED SLEEVE	LF	20
8042	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED	LF	480
8046	FURNISH AND INSTALL 1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE	LF	40
8047	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT	EA	1
8048	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG - THHN/THWN	LF	130
8049	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	12
8050	INSTALL GROUND MOUNTED SIGN	SF	87
8051	INSTALL OVERHEAD SIGN	SF	134
8057	FURNISH AND INSTALL GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH	EA	4
8059	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)	LF	350
8062	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)	LF	120
8063	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)	LF	2280
8064	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO 14 AWG)	LF	900
8065	FURNISH AND INSTALL SAWCUT FOR SIGNAL (LOOP DETECTOR)	LF	350
8070	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1
Neg.	FURNISH AND INSTALL 2 INCH ELECTRICAL CONDUIT SCHEDULE 80 PVC CONDUIT BEND AT EXISTING UTILITY POLE	LF	60
Neg.	5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	LF	250
Neg.	10 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	LF	645
Neg.	FURNISH AND INSTALL 4" x 4" WOOD SIGN SUPPORTS	LF	66

WIRING DIAGRAM



PHASE SEQUENCE CHART

1	2	3	4	5	6	7	8	9	10	11	12
(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)
(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)
(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)

PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	R	R
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 4 AND 8	R	R	R	R	R	R	G	G	G	G	G	G
4 AND 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

FIRE HOUSE PRE-EMPTION

FIREHOUSE PRE-EMPTION PHASE 8	R	R	R	R	R	R	R	R	R	G	G	G
PRE-EMPTION CLEARANCE	R	R	R	R	R	R	R	R	R	Y	Y	Y
NORMAL OPERATION PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	R	R

INDICATION KEY  
R = RED  
Y = YELLOW  
G = GREEN  
FL = FLASHING